In the Claims:

1. (New) A method of manufacturing a gas diffusion electrode, the method comprising:

(a.) agglomerating a powder mixture with PTFE particles in a dry form to produce a dry an agglomerate;

(b.) adding an organic solvent to the dry agglomerate to produce a paste;

(c.) calendering the paste into a thin sheet with a thickness less than 1mm, to form an active layer or gas diffusion layer, one or both of said layers containing a current col/ector; and

(d.) combining said active layer and said gas diffusion layer to form a gas diffusion electrode.

2. (New) A method according to claim 1, characterized in that agglomeration is carried out using a ball mill for mixing.

3. (New) A method according to claim 2, characterized in that the powders are mixed for more than 30 minutes.

4. (New) A method according to claim 1, characterized in that agglomeration is carried out using a blender with blades rotating at 1000-3000 rpm.

5. (New) A method according to claim 4, characterized in that the powders are heated to a temperature in the range of 50-200°C prior to step (a).

6. (New) A method according to claim 4, characterized in that an agglomeration time of at least 1 minute is used.

7. (New) A method according to claim 1, characterized in that agglomeration is carried out using a high-speed mill with rotating blades which rotate at more than 10000 rpm.

8. (New) A method according to claim 7, characterized in that the agglomeration time is from 10 seconds to 5 minutes.

9. (New) A method according to claim 1, characterized in that the solvent is slowly added to the agglomerate with stirring.

10. (New) A method according to claim 9, characterized in that the agglomerate is heated during stirring.

11. (New) A method according to claim 1, characterized in that the paste is extruded into a thin film prior to calendering.

12. (New) A method according to claim 1, characterized in that a current collector or mechanical support is calendered into said film.

13. (New) A method according to claim 1, characterized in that the powder mixture forming the active layer is 100 wt% graphite.

14. (New) A method according to claim 1, characterized in that the powder mixture forming the active layer comprises 25-75 wt% graphite with platinum, and 25-75 wt% graphite.

15. (New) A method according to claim 1, characterized in that the powder mixture forming the active layer comprises 25-75 wt% graphite with Ag, Co, Fe, perovskites or spinells, and 25-75 wt% graphite.

16. (New) A method according to claim 1, characterized in that PTFE with a particle size less than 1 mm is added to the mixture before agglomeration step (a).

17. (New) A method according to claim 1, characterized in that the powder mixture comprises 55-75 wt% activated carbon or graphite and 25-45 wt% PTFE.

18. (New) A method according to claim 1, comprising a further calendering step wherein said electrode is calendered with a further gas diffusion layer made according to the method described in steps (a)-(d).

19. (New) A method according to claim 1, characterized in that said layers are combined in step (d) by calendering or pressing.

20. (New) A method according to claims 1, characterized in that said electrode is dried at a temperature less than 40°C.

21. (New) A method according to claim 1, characterized in that said steps (a)-(d) are performed in a continuous production line.

22. (New) A method according to claim 1, characterized in that said gas diffusion layer and said active layer are produced in parallel continuous production lines and said production lines are combined in the combining step (d).

23. (New) An electrode manufactured by a method according to claim 1.

24. (New) A gas diffusion electrode comprising a gas diffusion layer and an active layer, the gas diffusion layer comprising 55-75 wt% activated carbon or graphite and 25-45 wt% PTFE and the active layer comprising 25-75 wt% activated carbon or graphite with noble or non-noble metal catalyst and 25-75 wt% activated carbon or graphite with high surface area (> 1 00 m^2/g) and 5-20 wt% PTFE, the gas diffusion layer and the active layer being manufactured according to the method in claim 1.

25. (New) Use of the gas diffusion electrode according to claim 23 in fuel cells, metal-air batteries or membranes.